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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/047,566	01/15/2002	Yakov Reznichenko	2550/118	4679
2101	7590	02/17/2005	EXAMINER	
BROMBERG & SUNSTEIN LLP 125 SUMMER STREET BOSTON, MA 02110-1618			ROBINSON, MARK A	
			ART UNIT	PAPER NUMBER
			2872	

DATE MAILED: 02/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/047,566	Applicant(s) REZNICHENKO, YAKOV	
	Examiner Mark A. Robinson	Art Unit 2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 4-6 and 10-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 7-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/13/04 has been entered.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the cover being attached to the substrate must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended.

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The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-3 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description

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requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The newly added limitation concerning the "cover attached to the substrate over the mirrors" is not supported by the specification or drawings as originally filed and is considered to constitute new matter. Although applicant has stated on p. 6 of the response that the cover being attached to the substrate is well known and is tangential to the subject matter of the invention, applicant later bases arguments against the rejection (p. 7) on this feature, thus demonstrating the criticality of this feature.

Claim Rejections - 35 USC § 102

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 7-9 rejected under 35 U.S.C. 102(b) as being anticipated by applicant's admission of the prior art shown in fig. 5.

These claims stand rejected as discussed previously, with fig. 5 showing a MEMS switching apparatus including first and second MEMS arrays with first(120) and second(130) plurality of

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mirrors and first and second covers formed into covering lenses(510,520) disposed over the mirrors (i.e. in the incoming/outgoing light path) for adjusting an optical field.

7. Claims 7-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Neilson (US 2003/0002783).

These claims stand rejected as discussed previously, with Neilson showing a MEMS switching apparatus including first and second MEMS arrays with first(105) and second(115) plurality of mirrors, and first and second covers formed into covering lenses(107,117) disposed over the mirrors (i.e. in the incoming/outgoing light path) for adjusting an optical field.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admission of the prior art shown in fig. 5.

These claims stand rejected as discussed previously, with fig. 5 showing a MEMS switching apparatus including substrates with first(120) and second(130) plurality of mirrors, and covers formed into covering lenses(510,520) disposed over the mirrors (i.e. in the incoming/outgoing light path) for adjusting an optical field.

Prior art fig. 5 does not show the covering lens to be attached to the substrate. However, the various components in an optical system are commonly attached to each other. Attaching by some means the covering lens to the substrate would have been obvious to the ordinarily skilled artisan at the time of invention in order to maintain proper alignment of the lens relative to the plurality of mirrors as would be required for the apparatus to function properly.

10. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neilson (US 2003/0002783).

These claims stand rejected as discussed previously, with Neilson showing a MEMS switching apparatus including substrates with first(105) and second(115) plurality of mirrors, and covers

formed into covering lenses(107,117) disposed over the mirrors (i.e. in the incoming/outgoing light path) for adjusting an optical field.

Neilson does not show the covering lens to be attached to the substrate. However, the various components in an optical system are commonly attached to each other. Attaching by some means the covering lens to the substrate would have been obvious to the ordinarily skilled artisan at the time of invention in order to maintain proper alignment of the lens relative to the plurality of mirrors as would be required for the apparatus to function properly.

Response to Arguments

11. Applicant's arguments filed 12/13/04 have been fully considered but they are not persuasive.

Applicant has argued that the prior art does not show the arrangement for the covering lenses as presently claimed, specifically the covering lenses being attached to the substrate (claim 1).

However, this limitation raises the issue of new matter as set forth above since the originally filed specification and drawings do not provide support for the cover being attached to the substrate.

Further, the general provision of the covering lenses being attached to the substrate would have been obvious over the prior art for the reasons set forth in the rejection above.

Applicant has also argued that the lenses shown by the prior art are not "covering lenses" since they do not act as covers for the MEMS arrays and are not a part of the MEMS arrays.

However, the MEMS arrays are not limited by closed language to only those elements recited. Thus, the lenses shown by the references may be considered as a part of the arrays. Further, applicant has not provided the term "covering" with a special definition. Accordingly, this term is being given its broadest reasonable interpretation. The prior art lenses may be considered to "cover" the mirrors since they are placed over or extend over (Webster's II New College Dictionary) the mirrors as viewed from the optical path.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Robinson whose telephone number is (571) 272-2319.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn, can be

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reached at (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MR

2/15/05


MARK A. ROBINSON
PRIMARY EXAMINER